

## OIB - DC-8 - AFRC 10/15/18 Science Report

**Aircraft:** [DC-8 - AFRC](#) ([See full schedule](#))

**Date:** Monday, October 15, 2018

**Mission:** OIB

**Mission Location:** Stancomb Inshore

**Mission Summary:**

Mission: Stancomb Inshore

Priority: Medium

Today we had a very successful mission, even after a deterioration of weather forecasts from the previous evening throwing us a curveball and requiring us to pick an entirely new mission, one which we previously had not considered, and a slight airport runway issue this morning. Regardless of these events we were still able to take off on time.

The Stancomb Inshore is a land ice mission that was designed in 2018 and first flown today. This particular mission was designed for radar and lidar data collection along 4 ICESat-2 ground tracks and also along the grounding line flow of the Stancomb-Wills glacier. Today's mission was chosen based on clear skies in the region, and because the forecasts were correct, we were able to achieve 100% data collection for all instruments, with no weather, environmental factors or instrument issues encountered. Other higher priority missions were not obtainable based on poor and deteriorating weather conditions throughout the day.

The 4 ICESat-2 ground tracks that were flown and their latency between the IS2 crossovers are listed below:

Line 0115, dt = 82 days

Line 0176, dt = 86 days

Line 0237, dt = 90 days

Line 0298, dt = 3 days

During the flight we were able to conduct 6 classroom chats with students in grades K-12 all across the country, from Alaska, Washington and Kansas; reaching a total of 148 students.

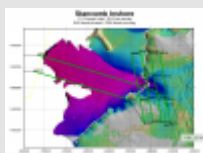
As we finished up our data collection, we got to witness the Antarctic sunset over the Brunt ice shelf and some Weddell sea ice, which was breathtaking and a satisfying way to wrap up our successful mission.

Attached images:

1. Map of today's mission (John Sonntag/NASA)
2. Snow radar image of snow on sea ice (right), with the abrupt edge of the Brunt ice shelf (left) (Aaron Wells/IU)
3. ATM T6 elevation map of a crevasse field on the Stancomb-Wills Glacier. (Matt Linksweller/NASA)
4. Panoramic photo of a large iceberg A68 (Jeremy Harbeck/NASA)
5. Sea ice floes (bottom), evaporation over the open water from a polynya (middle) adjacent to the Brunt ice shelf (top) (Linette Boisvert/NASA)
6. A crevasse field at sunset on the Stancomb-Wills Glacier (Linette Boisvert/NASA)
7. Sunset over sea ice and leads in the Weddell Sea (Jeremy Harbeck/NASA)

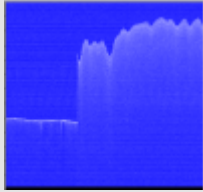
**Images:**

### Figure 1



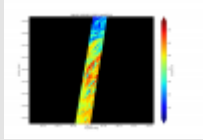
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### Figure 2



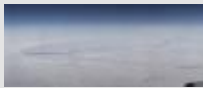
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## Figure 3



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## Figure 4



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## Figure 5



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## Figure 6



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## Figure 7



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